

CR 134316

(NASA-CR-134316) SEMIANNUAL FORECAST FOR
GOVERNMENT FURNISHED MATERIALS
PRESSURANTS/PROPELLANTS FOR SPACE SHUTTLE
ORBITER (Rockwell International Corp.,
Downey, Calif.) -46 p HC \$5.50 CSCL 21I

N74-28222

Unclas
42847

G3/27

SD74-SH-0125

SEMI-ANNUAL FORECAST FOR
GOVERNMENT FURNISHED MATERIALS
PRESSURANTS/PROPELLANTS
FOR
SPACE SHUTTLE ORBITER PROGRAM

26 April 1974

CONTRACT NAS9-14000

W.B.S. 1.1.5

IRD LS-123T



Space Division
Rockwell International

SD74-SH-0125

SEMI-ANNUAL FORECAST FOR
GOVERNMENT FURNISHED MATERIALS
PRESSURANTS/PROPELLANTS
FOR
SPACE SHUTTLE ORBITER PROGRAM

26 April 1974

CONTRACT NAS9-14000

W.B.S. 1.1.5

IRD LS-123T



Space Division
Rockwell International

CONTENTS

<u>DESCRIPTION</u>	<u>PAGE</u>
AMMONIA	1
FREON	2, 2A
HELIUM, GASEOUS	3 thru 9
HYDRAZINE, $N_2 H_4$	10
HYDROGEN, GASEOUS	11 and 12
HYROGEN, LIQUID	13, 13a, 13b, 13c
MONOMETHYL HYDRAZINE	14, 15, 16
MITROGEN, GASEOUS	17 thru 21
NITROGEN, LIQUID	22 thru 27
OXYGEN, GASEOUS	28 and 29
OXYGEN, LIQUID	30, 31, 32
TETROXIDE, HITROGEN	33 and 34
WATER, COOLANT	35
WATER, POTABLE	36

INTRODUCTION

This report is a semi-annual forecast of Government Furnished Pressurants and Propellant and GFM required at Space Division Test Sites, sub-contractor sites, or Government sites to support the development, fabrication, production, and test of the Space Shuttle Orbiter. Any significant changes in this forecast will be coordinated with NASA/JSC Representatives. This forecast submittal is in accordance with the Space Shuttle Integration Contractor's information requirements document SD72-SH-0090, IRD LS-123T.

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1966

3. REPORTING PERIOD (Month and year)

FROM 1974 TO 1977

Pounds

7. STORAGE AVAILABILITY AT DESTINATION

☐ RAIL ☒ TRUCK

Unknown

YEAR	MONTH QUARTER	Ecless Testing Downey
------	-----------------------------	---------------------------------

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on test requirements and historical records.

SIGNATURE

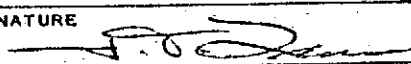
SIGNATURE

FORECAST OF PROPELLANT REQUIREMENTS <small>(See Instructions on reverse.)</small>		1. DATE PREPARED: 4-19-74 <small>Budget Bureau No. 104-R024 Approval Expires Mar 31, 1966</small>	
2. REPORTING ACTIVITY (Enter complete name and destination shipping address) Rockwell International Space Division 12214 Lakewood Blvd. Downey, Calif. 90241		3. REPORTING PERIOD (Month and year)	
		FROM 1974	TO 1977
5. STOCK NO. AND NOMENCLATURE OF ITEM Freon MSFC Spec 237A		4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.) Pounds	
		7. STORAGE AVAILABILITY AT DESTINATION Unknown	
		6. METHOD OF SHIPMENT (Check both, if applicable) <input type="checkbox"/> RAIL <input checked="" type="checkbox"/> TRUCK	

6. YEAR	9. MONTH/ QUARTER	10. CONTRACT NO., PROGRAM, OR PROJECT TITLE					
		Orbiter Sub-Assy Downey	Orbiter Aft Fus. & Crew Mod Downey	Orbiter Major Assy Activation Downey			
1974	1						
	2			855			
	3			855			
	4			1,140			
1975	1	2,280					
	2	2,280	2,280				
	3	2,280	2,280				
	4	2,280	2,280				
1976	1	3,420	2,280				
	2	3,420	2,280				
	3	2,280	2,280				
	4	1,140	2,280				
1977	1	1,140	2,280				
	2						
	3						
	4						
1978	1						
	2						
	3						
	4						


11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and historical records.

12. TYPED NAME OF PREPARING OFFICER J. T. Lane, Supervisor, Shuttle Logistics Management	SIGNATURE 
13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL	SIGNATURE

FORECAST OF PROPELLANT REQUIREMENTS <i>(See instructions on reverse.)</i>		1. DATE PREPARED: Budget Bureau No. 104-R024 4-19-74 Approval Expires Mar-A 31, 1966	
2. REPORTING ACTIVITY (Enter complete name and destination shipping address) Rockwell International - To be used at SD Space Division PIMD Fac. 1500 Ave. M 12214 Lakewood Blvd. Site 1, A.F. Plant 42 Downey, Calif. 90241 Palmdale, Ca. 93550		3. REPORTING PERIOD (Month and year). FROM 1974 TO 1977	
		4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.) Pounds	
5. STOCK NO. AND NOMENCLATURE OF ITEM Freon MSFC Spec 237A		6. METHOD OF SHIPMENT (Check both, if applicable) <input type="checkbox"/> RAIL <input checked="" type="checkbox"/> TRUCK	
		7. STORAGE AVAILABILITY AT DESTINATION Unknown	

11. METHOD OF COMPUTATION AND REMARKS

12. TYPED NAME OF PREPARING OFFICER	SIGNATURE
J. T. Lane, Supervisor, Shuttle Logistics Management	
13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL	SIGNATURE

SD74-SH-0125

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1966

3. REPORTING PERIOD (Month and year)

FROM

1974

TO

1977.

Standard Cubic Feet

7. STORAGE AVAILABILITY AT DESTINATION

☒ RAIL ☒ TRUCK

Unknown

9.

~~MONTHLY~~
QUARTER

Elec. Pwr.
Generation
Cryogenic
Tank Sub-
Contractor

1

50,000

50,000

50,000

85,000

1975

2

85,000

85,000

85,000

1976

1

30.000

30.000

30.000

1977

7

40,000

2

23

11

1978

1

2

—

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.


SIGNATURE

SIGNATURE

[illegible]

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.

12. TYPED NAME OF PREPARING OFFICER	SIGNATURE
J. T. Lane, Supervisor, Shuttle Logistics Management	
13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL	SIGNATURE

(See instructions on reverse.)

4-19-74

Approval Expires March 11, 1964

3. REPORTING PERIOD (Month and year)

FROM 1974 TO 1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.) **Standard Cubic Feet**

6. METHOD OF SHIPMENT
(Check both, if applicable)

7. STORAGE AVAILABILITY AT DESTINATION

☒ RAIL ☒ TRUCK

Unknown

8.	9.	10.	CONTRACT NO., PROGRAM, OR PROJECT TITLE				
YEAR	MONTH/ QUARTER	MPTA Test					
1974	1						
	2						
	3						
	4						
1975	1						
	2						
	3						
	4						
1976	1						
	2						
	3						
	4	65,000					
1977	1	65,000					
	2						
	3						
	4						
1978	1						
	2						
	3						
	4						

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.

SIGNATURE

[Signature]

SIGNATURE

(See instructions on reverse.)

4-19-74

Approval Expires March 22, 1966.

3. REPORTING PERIOD (Month and year):

FROM 1974 TO 1977

UNIT OF MEASUREMENT (Tons, lbs., cubic feet,
cords, gallons, etc.) Standard Cubic Feet

K-Cylinders

☒ RAIL ☒ TRUCK

11. METHOD OF COMPUTATION AND REMARKS

12. TYPED NAME OF PREPARING OFFICER

SIGNATURE

SIGNATURE

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1956

2. REPORTING ACTIVITY (Enter complete name and destination shipping address)

12214 Lakewood Blvd.

Downey, Calif. 90241 St. Louis Mo.

3. REPORTING PERIOD (Month and year)

FROM

1974

TO

1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.)

Standard Cubic Feet

5. STOCK NO. AND NOMENCLATURE OF ITEM

Helium, Gaseous.

FSN 9135-926-8888

MTL-P-27407

6. METHOD OF SHIPMENT
(Check both, if applicable)

☒ RAIL

☒ TRUCK

7. STORAGE AVAILABILITY AT DESTINATION

K-Cylinders

[illegible]

11. METHOD OF COMPUTATION AND REMARKS

Based on anticipated testing requirements.

12. TYPED NAME OF PREPARING OFFICER

J. T. Lane, Supervisor, Shuttle Logistics Management

13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL

SIGNATURE

SIGNATURE

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1956

3. REPORTING PERIOD (Month and year):

FROM 1974 TO 1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.).

6. METHOD OF SHIPMENT
(Check both, if applicable)

7. STORAGE AVAILABILITY AT DESTINATION

☒ RAIL ☒ TRUCK

(Twenty) 55 Gal. Drums

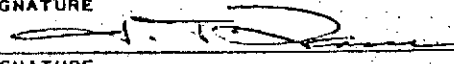
11. METHOD OF COMPUTATION AND REMARKS

12. TYPED NAME OF PREPARING OFFICER

SIGNATURE

13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL

SIGNATURE

FORECAST OF PROPELLANT REQUIREMENTS <small>(See instructions on reverse.)</small>				1. DATE PREPARED 4-19-74		Budget: Bureau No. 104-R624 Approval Expires March 31, 1976	
2. REPORTING ACTIVITY <small>(Enter complete name and destination shipping address)</small> Rockwell International - To be used at Beech Space Division Aircraft 12214 Lakewood Blvd. Boulder, Colorado 80302 Downey, Calif. 90241				3. REPORTING PERIOD <small>(Month and year)</small> FROM 1974 TO 1977		4. UNIT OF MEASUREMENT <small>(Tons, lbs., cubic feet, bottles, gallons, etc.)</small> Standard Cubic Feet	
5. STOCK NO. AND NOMENCLATURE OF ITEM Hydrogen, Gaseous FSN 9135-823-8133 MIL-P-27201C			6. METHOD OF SHIPMENT <small>(Check both, if applicable)</small> <input checked="" type="checkbox"/> RAIL <input checked="" type="checkbox"/> TRUCK		7. STORAGE AVAILABILITY AT DESTINATION Unknown		
8.	9.	10. CONTRACT NO., PROGRAM, OR PROJECT TITLE					
YEAR	MONTH/ QUARTER	Elec. Pwr. Generation Cryogenic Tank Sub- Contractor					
1974	1						
	2	58,000					
	3	58,000					
	4	58,000					
1975	1	95,000					
	2	95,000					
	3	95,000					
	4	95,000					
1976	1	34,000					
	2	34,000					
	3	34,000					
	4	34,000					
1977	1	46,000					
	2						
	3						
	4						
1978	1						
	2						
	3						
	4						
11. METHOD OF COMPUTATION AND REMARKS Requirements based on anticipated tests and review of historical records.							
12. TYPED NAME OF PREPARING OFFICER J. T. Lane, Supervisor, Shuttle Logistics Management					SIGNATURE 		
13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL					SIGNATURE		

FORECAST OF PROPELLANT REQUIREMENTS

(See instructions on reverse.)

1. DATE PREPARED

4-19-74

Budget Bureau No. 104-RG24

Approval Expires March 31, 1976

2. REPORTING ACTIVITY (Enter complete name and destination shipping address)

Rockwell International - To be used at Pratt &
Space Division Whitney Aircraft, 400
12214 Lakewood Blvd. Main St.
Downey, Calif. 90241 E. Hartford, Conn. 06108

3. REPORTING PERIOD (Month and year)

FROM

1974

TO

1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.) Standard Cubic Feet

5. STOCK NO. AND NOMENCLATURE OF ITEM

Hydrogen, Gaseous
FSN 9135-823-8133
MIL-P-27201C

6. METHOD OF SHIPMENT
(Check both, if applicable)

☒ RAIL

☒ TRUCK

7. STORAGE AVAILABILITY AT DESTINATION

Unknown

8.

9.

10.

CONTRACT NO., PROGRAM, OR PROJECT TITLE

YEAR

MONTH/
QUARTER

Elec. Pwr.
Generation
Fuel Cell
Pwr. Plant
Sub-Contractor

1974

1

76,000

2

76,000

3

76,000

4

76,000

1975

1

114,000

2

114,000

3

114,000

4

114,000

1976

1

56,000

2

56,000

3

56,000

4

56,000

1977

1

38,000

2

3

4

1978

1

2

3

4

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.

12. TYPED NAME OF PREPARING OFFICER

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

SIGNATURE

13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1954

Rockwell International - To be used at
Space Division Mississippi Test
12214 Lakewood Blvd. Facility
Downey, Calif. 90241

FROM

TO

1974

1977

Tons

Hydrogen, Liquid
FSN 9135-611-1347
MIL-P-27201B

☒ RAIL ☒ TRUCK

Unknown

8.

8.	9.
YEAR	MONTH / QUARTER

10.	MPTA Test
-----	--------------

CONTRACT NO., PROGRAM, OR PROJECT TITLE

1974

1

1975

1

1976

1

1977

1

1978

1

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.

12. TYPED NAME OF PREPARING OFFICER

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

SIGNATURE

NASA FORM 1057, APR 64

SD74-SH-0125

13a

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1966

Rockwell International
Space Division
12214 Lakewood Blvd.
Downey, Calif. 90241

FROM

1974

• 70

1977

Tons

Hydrogen, Liquid
FSN 9135-611-1347
MIL-P-27201B

☐ RAIL

☒ TRUCK

Unknown

8

~~NORTH~~
QUARTER

Component Suppliers

1974

1

2

3

24

1975

1

1.6

1.6

1.6

1.6

1976

1.

1.6

3

4

1977

1

2

3

4

1978

1

2

3

11

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and historical records.

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

SIGNATURE

(See instructions on reverse.)

4-19-74

Budget Bureau No. 104-R624
Approval Expires March 31, 1956

Rockwell International - To be used at
Space Division Beech Aircraft
12214 Lakewood Blvd. Boulder, Colorado 80302
Downey, Calif. 90241

3. REPORTING PERIOD (Month and year)

FROM

1974

70

1977

4. UNIT OF MEASUREMENT (*Tons, lbs., cubic feet, bottles, gallons, etc.*) **Tons**

Tons

Hydrogen, Liquid

FSN 9135-611-1347

MSFC-SPEC-356A - MIL-P-27201B

6. METHOD OF SHIPMENT
(Check both, if applicable)

 RAIL☒ TRUCK

7. STORAGE AVAILABILITY AT DESTINATION

Unknown

8. YEAR	9. MONTH/ QUARTER	10. Elec. Power Gen. Cryogenic Tank Supplier	CONTRACT NO., PROGRAM, OR PROJECT TITLE					
1974	1							
	2							
	3							
	4							
1975	1							
	2	2.6						
	3							
	4	5.9						
1976	1							
	2							
	3	2.0						
	4							
1977	1							
	2							
	3							
	4							
1978	1							
	2							
	3							
	4							

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.

12. TYPED NAME OF PREPARING OFFICER

J. T. Lane, Supervisor, Shuttle Logistics Management

13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL

SIGNATURE

SIGNATURE

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1964

3. REPORTING PERIOD (Month and year)

FROM 1974 TO 1977

MENT (Applicable)	7. STORAGE AVAILABILITY AT DESTINATION Storage Space for 350, 55 Gal. Drums, Bulk Storage of 2300 Gals. by 4th Atr. 1974.
TRUCK	

6. METHOD OF SHIPMENT
(Check both, if applicable)

☐ RAIL ☐ TRUCK

7. STORAGE AVAILABILITY AT DESTINATION
Storage Space for 350, 55 Gal.
Drums, Bulk Storage of 2300
Gals. by 4th Atr. 1974.

11. METHOD OF COMPUTATION AND REMARKS

12. TYPED NAME OF PREPARING OFFICER
J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

FORECAST OF PROPELLANT REQUIREMENTS

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1966.

2. REPORTING ACTIVITY (Enter complete name and destination shipping address)

Rockwell International - To be used at
Space Division MAC/DAC

12214 Lakewood Blvd.

Downey, Calif. 90241

St. Louis, Mo.

3. REPORTING PERIOD (Month and year)

FROM

1974

TC

1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.)

bottles, gallons, etc.)

Pounds

5. STOCK NO. AND NOMENCLATURE OF ITEM

Monomethyl Hydrazine (MMH)

MIL-P-27404A

6. METHOD OF SHIPMENT.
(Check both, if applicable)

☒

RAIL

X□

TRUCK

7. STORAGE AVAILABILITY AT DESTINATION

40 Gal. Drum

[illegible]

11. METHOD OF COMPUTATION AND REMARKS

Based on anticipated testing requirements.

12. TYPED NAME OF PREPARING OFFICER

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL

SIGNATURE

(See instructions on reverse.)

4-19-74

Budget Bureau No. 104-H634

Approval Expires March 31, 1954.

3. REPORTING PERIOD (Month and year)

FROM 1974 TO 1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.) Pounds

6. METHOD OF SHIPMENT
(Check both, if applicable)


7. STORAGE AVAILABILITY AT DESTINATION:

☒ RAIL ☒ TRUCK

24,000 Pounds Storage

[illegible]

Requirements based on anticipated tests and review of historical records.

SIGNATURE 

SIGNATURE

FORECAST OF PROPELLANT REQUIREMENTS

(See instructions on reverse.)

1. DATE PREPARED

4-19-74

Budget Bureau No. 104-R623

Approval Expires March 31, 1976

2. REPORTING ACTIVITY (Enter complete name and destination shipping address)

Rockwell International - To be used at SD
Space Division PLMD Fac. 1500 Ave. M
12214 Lakewood Blvd. Site 1 A.F. Plant 42
Downey, Calif. 90241 Palmdale, Calif. 93550

3. REPORTING PERIOD (Month and year)

FROM 1974 TO 1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.)

Standard Cubic Feet

5. STOCK NO. AND NOMENCLATURE OF ITEM

Nitrogen, Gaseous
FSN 9135-823-8115
MSEC-SPEC-234A

6. METHOD OF SHIPMENT
(Check both, if applicable)

☒ RAIL ☒ TRUCK

7. STORAGE AVAILABILITY AT DESTINATION

Unknown

8. YEAR	9. MONTH/QUARTER	10. CONTRACT NO., PROGRAM, OR PROJECT TITLE					
		Orbiter Major Assy Activation	Orbiter Final Assy Activation				
1974	1	Palmdale	Palmdale				
	2		69,000				
	3		111,000				
	4	69,000	138,000				
1975	1	97,000	138,000				
	2	138,000	138,000				
	3		138,000				
	4		111,000				
1976	1		111,000				
	2		111,000				
	3		111,000				
	4		69,000				
1977	1						
	2						
	3						
	4						
1978	1						
	2						
	3						
	4						

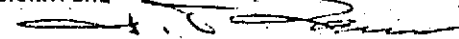
11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated production operations, testing activation of facilities and equipment to support the Orbiter Production Operations schedules.

12. TYPED NAME OF PREPARING OFFICER

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE



13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL

SIGNATURE

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1966.

Rockwell International
Space Division
12214 Lakewood Blvd.
Downey, Calif. 90241

FROM

1974

TO

1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.) Standard Cubic Feet

Standard Cubic Feet

Nitrogen, Gaseous
MIL-P-24701, Type 1
MSFC-SPEC-234A

☒ RAIL ☒ TRUCK

Unknown

8.

9.

YEAR

~~MONTH~~/
QUARTER

External Tank Testing

Orbiter
Cavity
Purge

1974

1

1975

1

26,000

85,000

1976

1

26,000

85,000

1977

1

26,000

85,000

1978

1

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.

12. TYPED NAME OF PREPARING OFFICER

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

SIGNATURE

NASA FORM 1057 APR 64

SD74-SH-0125

FORECAST OF PROPELLANT REQUIREMENTS

(See instructions on reverse.)

1. DATE PREPARED

4-19-74

Budget: Bureau No. 104-K624
Approval Expires March 31, 1956

Budget: Bureau No. 104-K624
Approval Expires March 31, 1956

2. REPORTING ACTIVITY (Enter complete name and destination shipping address)

Rockwell International - To be used at
Space Division Mississippi,
12214 Lakewood Blvd. Test Facility
Downey, Calif. 90241

3. REPORTING PERIOD (Month and year):

FROM 1974 TO 1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.) Tons

5. STOCK NO. AND NOMENCLATURE OF ITEM

Nitrogen, Liquid
FSN 9135-854-0493
MSFC Spec 234A

6. METHOD OF SHIPMENT
(Check both, if applicable)

☒ RAIL ☒ TRUCK

7. STORAGE AVAILABILITY AT DESTINATION

Unknown

8.	9.	10. CONTRACT NO., PROGRAM, OR PROJECT TITLE
----	----	---

[illegible]

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.

12. TYPED NAME OF PREPARING OFFICER

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

[Signature]

13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL

SIGNATURE

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1968

Rockwell International - To be used at
SpaceDivision Beech Aircraft
12214 Lakewood Blvd. Boulder, Colorado 80302
Downey Calif. 90241

FROM

TO

1974

1977

4. UNIT OF MEASUREMENT (*Tons, lbs., cubic feet, bottles, gallons, etc.*) Tons

Tons

Nitrogen, Liquid
FSN 9135-854-0493
MSFC-SPEC-234A

☒ RAIL☒ TRUCK:

Unknown

9.

YEAR

~~MONTHLY~~
QUARTER

10.
Elec. Pwr.
Generation
Cryogenic
Tank Sub-
Contractor

CONTRACT NO., PROGRAM, OR PROJECT TITLE

1974

7

90
90
91

1975

1

153
153
154
155

1976

1

55
54
54
54

1977

1

72

1978

1

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.

12. TYPED NAME OF PREPARING OFFICER

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

SIGNATURE

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1956

Rockwell International - To be used at
Space Division Component Suppliers
12214 Lakewood Blvd. Facility
Downey Calif. 90241 To be determined

FROM 1974 TO 1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.) Tons

Nitrogen, Liquid
FSN 9135-854-0493
MSFC-SPEC-234A

☒ RAIL ☒ TRUCK

Unknown

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL

(See instructions on reverse.)

4-19-74

Budget Bureau No. 104-K024
Approval Expires March 31, 1966

3. REPORTING PERIOD (Month and year)

FROM 1974 TO 1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.) **Standard Cubic Feet**

6. METHOD OF SHIPMENT
(Check both, if applicable)

7. STORAGE AVAILABILITY AT DESTINATION

☒ RAIL ☒ TRUCK

Unknown

MTL-P-27401

11. METHOD OF COMPUTATION AND REMARKS

12. TYPED NAME OF PREPARING OFFICER

SIGNATURE

13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL

SIGNATURE

FORECAST OF PROPELLANT REQUIREMENTS

(See instructions on reverse.)

1. DATE PREPARED:

4-19-74

Bufile: Bureau No. 104-RG24

Approval Expires March 31, 1966

2. REPORTING ACTIVITY (Enter complete name and destination shipping address)

Rockwell International - To be used at
Space Division Mississippi Test
12214 Lakewood Blvd. Facility
Downey, Calif. 90241

3. REPORTING PERIOD (Month and year)

FROM

1974

TO

1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.).

bottles, gallons, etc.) Tons

5. STOCK NO. AND NOMENCLATURE OF ITEM

Nitrogen, Commercial

FSN 9135-854-0493

MTL-P-27401

6. METHOD OF SHIPMENT
(Check both, if applicable)

☒ RAIL

☒ TRUCK

7. STORAGE AVAILABILITY AT DESTINATION

Unknown

8.	9.	10. CONTRACT NO., PROGRAM, OR PROJECT TITLE
----	----	---

[illegible]

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.

12. TYPED NAME OF PREPARING OFFICER

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

SIGNATURE

NASA FORM 1057 APR 64

SD74-SH-0125

25a.

(See instructions on reverse.)

4-19-74

Approval Expires March 31, 1968

3. REPORTING PERIOD (Month and year)

FROM 1974 TO 1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, barrels, gallons, etc.) **Tons**

6. METHOD OF SHIPMENT
(Check both, if applicable)

7. STORAGE AVAILABILITY AT DESTINATION

Unknown

9.

~~SECRET~~
QUARTER

CONTRACT NO., PROGRAM, OR PROJECT TITLE

1

2

3.

4

1

2

3

4

1

3

1

2

3-

4

1	2
---	---

2

— 4 —

4.

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and review of historical records.

SIGNATURE

SIGNATURE

SIGNATURE

(See instructions on reverse.)

Approval Expires March 31, 1958

3. REPORTING PERIOD (Month and year)


FROM 1974 TO 1977

6. METHOD OF SHIPMENT
(Check both, if applicable)

7. STORAGE AVAILABILITY AT DESTINATION
(1) 5,000 Gal. Tank, (1) 13,000 Gal. Tank, (2) 1,800 Gal. Tanks, (2) 26,000 Gal. Tanks

[illegible]

Requirements based on anticipated tests and review of historical records; production operations build-flow plans and schedules of Orbiter tests and production.

SIGNATURE 

SIGNATURE _____

(See instructions on reverse.)

4-19-74

Approval Expires March 22, 1966

Rockwell International - To be used at SD
Space Division PLMD Fac. 1500 Ave. M
12214 Lakewood Blvd. Site 1, A.F. Plant 42
Downey, Calif. 90241 Palmdale, Ca. 93550

FROM

1974

TO

1977

Tons

Nitrogen, Liquid
FSN 9135-965-2526
MSFC-SPEC-234A

RAIL

☒ TRUCK

Unknown

YEAR

QUARTER

Orbiter Assy
& C/O

Palmdale

1974

1

2

3

4

1975

1

2

3

11

1976

1

2

3

11

1977

7

2

3.

24

1978

1.

2

3

11

11. METHOD OF COMPUTATION AND REMARKS

Requirements are based on production operations build-flow plans and schedules of Orbiter production & Test.

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

FORECAST OF PROPELLANT REQUIREMENTS

(See instructions on reverse.)

1. DATE PREPARED

4-19-74

Budget Bureau No. 104-RG24

Approval Expires March 21, 1966

2. REPORTING ACTIVITY (Enter complete name and destination shipping address)

Rockwell International - To be used at SD
Space Division PLMD Fac., 1500 Ave. M
12214 Lakewood Blvd. Site 1, A.F. Plant 42
Downey, Calif. 90241 Palmdale, Ca. 93550

3. REPORTING PERIOD (Month and year)

FROM 1974 TO 1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.)

5. STOCK NO. AND NOMENCLATURE OF ITEM

Oxygen, Gaseous
FSN 9135-965-2527 Grade A
MSFC-SPEC-399A

6. METHOD OF SHIPMENT
(Check both, if applicable)

☒ RAIL ☒ TRUCK

7. STORAGE AVAILABILITY AT DESTINATION

K-Cylinders

[illegible]

11. METHOD OF COMPUTATION AND REMARKS

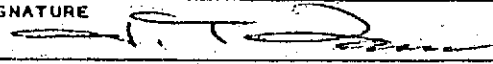
Requirements based on production operations involving the oxygen system during final assay, and checkout. Ground test requirements based on EPS operations for fuel cell checkout per production operations schedules.

12. TYPED NAME OF PREPARING OFFICER

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

SIGNATURE

FORECAST OF PROPELLANT REQUIREMENTS (See instructions on reverse.)				1. DATE PREPARED 4-19-74		Budget Bureau No. 104-RG24 Approval Expires March 31, 1966	
2. REPORTING ACTIVITY (Enter complete name and destination shipping address) Rockwell International - To be used at Space Division Pratt & Whitney 12214 Lakewood Blvd. Aircraft, 400 Main St. Downey, Calif. 90241 E. Hartford, Conn. 06108				3. REPORTING PERIOD (Month and year)			
				FROM 1974		TO 1977	
5. STOCK NO. AND NOMENCLATURE OF ITEM Oxygen, Liquid FSN 9135-965-2527 Grade A MSFC-SPEC-399A				6. METHOD OF SHIPMENT (Check both, if applicable) <input checked="" type="checkbox"/> RAIL <input checked="" type="checkbox"/> TRUCK		4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.)	
						Tons	
7. STORAGE AVAILABILITY AT DESTINATION Unknown							
10. CONTRACT NO., PROGRAM, OR PROJECT TITLE							
8. YEAR	9. QUARTER	10. Elec. Pwr. Generation Fuel Cell Pwr. Plant Sub-Contractor					
1974	1						
	2	1,354					
	3	1,354					
	4	1,354					
1975	1	2,031					
	2	2,031					
	3	2,031					
	4	2,031					
1976	1	1,008					
	2	1,008					
	3	1,008					
	4	1,008					
1977	1	788					
	2						
	3						
	4						
1978	1						
	2						
	3						
	4						
11. METHOD OF COMPUTATION AND REMARKS Requirements based on anticipated tests and review of historical records.							
12. TYPED NAME OF PREPARING OFFICER J. T. Lane, Supervisor, Shuttle Logistics Management						SIGNATURE 	
13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL						SIGNATURE	

(See instructions on reverse.)

4-19-74

Budget Bureau No. 104-RG24
Approval Expires March 31, 1964

3. REPORTING PERIOD (Month and year):

FROM 1974 TO 1977

Sacramento, Calif. 95813

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.) Pounds

6. METHOD OF SHIPMENT
(Check both, if applicable)

7. STORAGE AVAILABILITY AT DESTINATION

☒ RAIL ☒ TRUCK

Unidentified

MIL-P-26539C

8.	9.	10.	CONTRACT NO., PROGRAM, OR PROJECT TITLE					
YEAR	MONTH/ QUARTER	OAS Engine & Pod Sub- Contractor						
1974	1							
	2	42,100						
	3	48,500						
	4	37,100						
1975	1	44,200						
	2	48,000						
	3	38,800						
	4	74,400						
1976	1	87,300						
	2	98,700						
	3	132,700						
	4	107,900						
1977	1	87,900						
	2							
	3							
	4							
1978	1							
	2							
	3							
	4							

Requirements based on anticipated tests and review of historical records.

SIGNATURE

[Handwritten signature]

SIGNATURE

(See instructions on reverse.)

4-19-74

Budget Bureau No. 104-RG24
Approval Expires March 31, 1968

Rockwell International
Space Division
12214 Lakewood Blvd.
Downey, Calif. 90241

FROM

19

1974

1977

4. UNIT OF MEASUREMENT (Tons, lbs., cubic feet, bottles, gallons, etc.) Barrels

Pounds

Water, Coolant
MSC-SPEC-C20A

6. METHOD OF SHIPMENT
(Check both, if applicable)

☐ RAIL ☒ TRUCK

7. STORAGE AVAILABILITY AT DESTINATION

Unknown

11. METHOD OF COMPUTATION AND REMARKS

Requirements based on anticipated tests and historical data.

J. T. Lane, Supervisor, Shuttle Logistics Management

SIGNATURE

13. TYPED NAME AND ORGANIZATION OF APPROVING OFFICIAL

SIGNATURE

(See instructions on reverse.)

4-19-74

Budget Bureau No. 194-R024
Approval Expires May 31, 1965

3. REPORTING PERIOD (Month and year)

FROM 1974 TO 1977

6. METHOD OF SHIPMENT
(Check both, if applicable)

7. STORAGE AVAILABILITY AT DESTINATION

☐ RAIL ☒ TRUCK

Unknown

[illegible]

Based on test requirements and historical records.

SIGNATURE

[Handwritten signature]

SIGNATURE